Clark County, Washington

Investment Management Review
Second Quarter 2000

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Signs have finally begun to emerge that the recent series of Fed interest rate hikes may finally be subduing the red-hot U.S. economy. The current Fed Funds rate is set at 6.5%. The next FOMC meeting is scheduled for August 22, and there appears to be no clear consensus on what action the Fed may take. Many market watchers are speculating that the Fed will leave rates unchanged as long as no major indicators between now and August 22 show a dramatic increase in economic activity.

The total County pool portfolio was equal to $397 million par as of June 30, increasing from $362 the prior quarter-end. The overall portfolio maturity lengthened over the quarter from 6.5 months to 8.5 months. This pool portfolio remained well diversified by sector and maintained a high overall credit quality, liquidity and exposure to call/reinvestment risk. A summary of first quarter highlights and PFM's recommendations follow.

- ***Asset Diversification* –** The asset allocation of the portfolio altered slightly quarter-over-quarter. The total commercial paper allocation increased by 8% and bankers acceptances increased by almost 3%. Both of these sectors represented relative yield advantage over comparable money market instruments. The total money market fund balance decreased over the period. The total Federal Agency and Treasury allocations were almost unchanged over the same period.

- ***Maturity Distribution* –** The County's pool portfolio did lengthen its average maturity to 8.5 months by June 30. Our suggested maturity target for the County's portfolio continues to be 9-10 months. Therefore, we would recommend that the County reinvest additional cash out to 24 month maturity range in order to capture the added yield benefit that currently existing in that very steep area of the yield curve.

- ***Credit Quality*** – The County maintained the portfolio's low exposure to credit risk. As of June 30, 86% of the portfolio was invested in securities rated "AAA" (highest long-term rating) or "A-1/P-1" (highest short-term rating.)

- ***Liquidity* –** As of the quarter end, 81% of the portfolio assets were categorized in one of PFM's top three liquidity rating categories (1, 2, and 3). The overall weighted liquidity factor was 2.89, just a bit higher than the 2.59 as of last quarter-end, and within PFM's recommended range of 2 to 4.

- ***Market Risk* –** Almost all of the County's pool portfolio was invested in securities maturing under 2-years as of June 30, classifying 96% of the portfolio in the low to low/average categories of market risk. As of March 31, 100% of the portfolio had been in securities with maturities under 2-years.

- ***Callable Exposure*** – The total portfolio exposure to call risk decreased over the quarter to 16%, as approximately $10 million par of a callable security matured during the past three months. This allocation is in line with PFM's recommended limit.

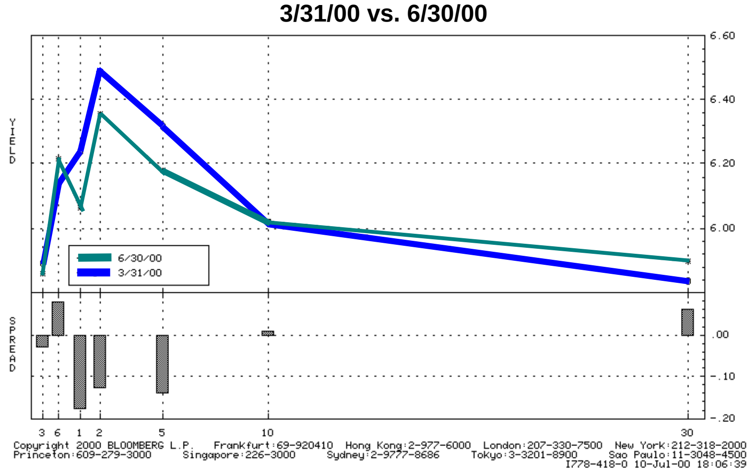
Second Quarter 2000 Economic Summary

Weak economic reports and an apparent slowdown in the economy in the latter half of the second quarter caused interest rates to fall sharply from their highs in mid-May. Early in the quarter, yields had risen in anticipation of a Federal Reserve rate hike. On May 16, the Fed raised short-term interest rates by ½ percent to 6.50% – a larger increase than many economists had expected. Shortly thereafter, rates began to fall, generally ending the quarter below the level at which they began the quarter on all securities except those at the longest end of the yield curve. The fall in interest rates increased returns for the fixed income investor, as lower yields translate into increased market values on current holdings. The market value appreciation of these holdings boosted performance for the second quarter, generating returns substantially better than those in the previous few quarters. The bond market rally was further fueled by the announcement by the FOMC on June 28 that the committee decided to maintain the existing stance of monetary policy, keeping short-term rates steady at 6.50%. The Fed did, however, express concern that "risks continue to be weighted mainly toward conditions that may generate heightened inflation pressures in the foreseeable future."

2-Year U.S. Treasury Yield History
1/1/00 – 6/30/00

The U.S. Treasury yield curve remains inverted, with yields on long-term Treasuries (10-30 years) lower than those on 1-5 year Treasury issues. This inversion has been caused in part by the expectation that rates will be lower in the future, thus making it worthwhile for investors to buy longer securities now rather than risking the chance of having to invest at lower rates in the future. The yield curve inversion is somewhat less pronounced than at the beginning of the quarter, as shorter-term yields fell more sharply than longer-term yields. In response to a growing Federal budget surplus, the Treasury is continuing to pay-down the Federal debt by reducing new issuance and buying-back pre-existing securities through the quarter, further reducing the supply of outstanding Treasury issues.

U.S. Treasury Yield Curve
3/31/00 vs. 6/30/00



Yield spreads between U.S. Treasury and Federal Agency securities widened in the first quarter and stabilized somewhat in the second quarter at levels considered wide by historical standards. Yield spreads are near levels seen during the perceived global financial crisis in the fall of 1998. In addition, spreads between U.S. Treasuries and high-grade corporate securities widened further in the second quarter to the widest spreads in more than ten years.

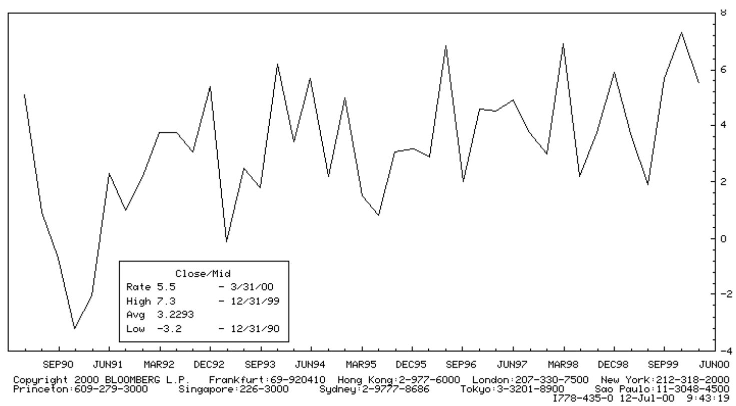
Fixed-income returns fared much better in the second quarter than the previous several quarters. For the quarter, 1-5 year Treasury and Federal Agency benchmarks returned over 7% on an annualized basis, while corporate returns were substantially lower due to the spread widening. For the period covering the past 12 months, however, intermediate-term returns ranged from the high three percent range to the mid-five percent range because returns for the previous three quarters were lackluster due to generally rising rates.

Economic data released during May and June were weaker than in recent quarters but were still robust. Virtually every indicator showed signs that the economy is still growing, but at a much slower pace. This data led many economists to conclude that slower economic growth will satisfy the Fed that inflation pressures have been contained – at least for now – and that no additional rate hikes may be necessary for some time.

Employment Job growth screeched to a halt in June after hitting a 12-year high in March when the economy added over ½ million jobs. Much of the decline, however, can be attributed to census workers who were hired by the U.S. Government in March, April and May and released in June. The unemployment rate fell to a 30-year low, 3.9%, in April and currently stands at 4.0%, a level considered close to "full employment."

Gross Domestic Product (GDP) The final GDP numbers for the first quarter were revised upward slightly to 5.5% from 5.4%. The year-over-year gain in GDP now stands at 5.1%. Economic profits were also revised higher, to post a gain of 5.0% from an originally reported 3.8 %, resulting in a year-over-year profit gain of 8.9%. The GDP revisions were expected and therefore did not have a large impact on the markets. These GDP numbers indicate that the economy was still growing quickly, at least during the first quarter. Second quarter expectations are for GDP to grow at 3.5 to 4.0%.

Gross Domestic Product
1/1/90 – 3/31/00



Consumer Confidence Consumer confidence fell in June, suggesting slowing, but still solid consumer spending. The decline was concentrated in consumers' concerns over future rather than current conditions. Buying plans for both autos and homes fell, with the percentage of consumers planning on buying an automobile falling to its lowest level in two years.

Housing Sector Housing starts were weak in May. The decline was concentrated in the interest-sensitive single-family sector, which fell to the lowest level in over a year. Building permits were also weaker than expected in May, the lowest level since December 1997, and the fourth consecutive monthly decline. New home sales also fell in April and May. These reports show evidence that higher mortgage rates have begun to slow the housing sector of the economy.

Retail Sales Retail sales were soft, as sales fell in both April and May. Weakness in spending over the last three months was most prevalent in sales of big ticket items like automobiles and furniture, the most interest sensitive areas of consumer spending, although sales from clothing stores and restaurants also declined.

Consumer and Producer Prices After surging in the first quarter, the rate of growth in consumer prices fell during April and were flat in May. The figure for June, which was not released as of this writing, is likely to show a large increase due to the recent spike in oil prices. Prices at the producer level were unchanged in April and up only .1% in May, also a reverse in trend from the high levels of the first quarter. On a year-over-year basis, both the CPI and PPI have now risen to the highest levels in roughly nine years.

From all economic accounts, it appears that the second quarter has been a transition quarter from the phenomenal growth of the previous few quarters. At this point, however, it remains unclear exactly where the second quarter transition is leading. If there are continued signs of slower growth and if inflation stays at current levels, the market rally may continue, driving interest rates down. Signs that indicate that growth is slowing and stabilizing would include GDP growth in the 3.5% range, employment growth around 200,000 jobs per month, and a growth in retail sales of about 3-4%. However, without continued evidence confirming an economic slowdown, it is possible that the market could retrace a significant portion of the fall in interest rates, driving interest rates back up and the Fed may hike the targeted Fed Funds rate toward 7%.

Current Market Overview

Many of the economic indicators released over the past month suggest that the economy may be moderating, at least modestly from the hot pace of the past several quarters. The signs were sufficient to keep the Federal Reserve on hold at its June 28 FOMC meeting. But the continued tightness in the labor market, as well as the high energy prices, is keeping the Fed wary.

An assessment of the economy is provided below:

- ***Employment*** – Only 11,000 new jobs were created in June, while the May number of new jobs created was revised to 171,000. The expectation was for 260,000 new jobs to be created in June, so the actual release was much lower. The *Unemployment Rate* declined to 4.0% from 4.1%. The news was taken favorably by many investors, who interpreted the numbers as another sign that the economy was slowing.

- ***Manufacturing*** – Data releases suggest a curb in manufacturing activity. After rising 0.4% in May, *Industrial Production* increased by only 0.2% in June, below forecasts. The *NAPM Index* also slipped for June to 51.8, the fourth consecutive month of decline for the index of manufacturing activity.

- ***Commodity Prices*** – Although OPEC agreed to moderately increase its production levels at after their June 21-23 meeting, crude oil prices remained high. The price per barrel has remained around $28, with continuing high demand during the hot summer months and high driving season. Although Saudia Arabia had announced that it was going to increase its production further, many analysts do not expect this increase to impact on the prices, particularly since many refineries are already working towards maximum capacity.

- ***Consumption*** –Consumers continue to spend, but not as fast as in 1999 or the beginning of 2000. *Retail Sales* rose 0.5% in June. Analysts were expecting a rise of only 0.3%. The same report showed that sales increased by only 0.2% when automobile sales were excluded from the figures.

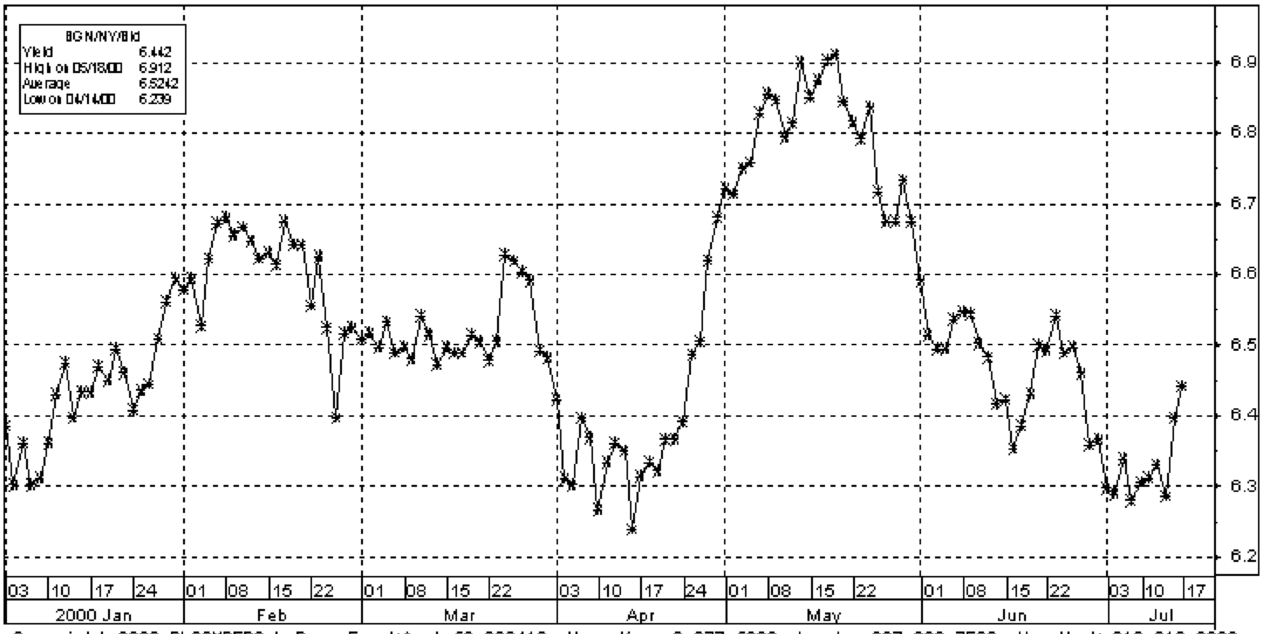
- ***Inflation*** – Prices remained relatively tame in June, according to the Labor Department. The *Producer Price Index* rose by 0.6% in June, in line with forecasts. Analysts focused on the *Core PPI* number, which excludes food and energy prices, which declined 0.1%. The *Consumer Price Index* increased by 0.6% for June, the largest gain in three months. The increase was led primarily by high gasoline and natural gas prices. The *Core CPI*, which excludes food and energy costs, rose only 0.2%, which was in line with analyst forecasts.

- ***Fed*** **–** The next Federal Reserve meeting is scheduled for August 22. The tone of Federal Reserve Chairman Greenspan's testimony before the Senate last week suggested that the Fed may keep rates the same at their upcoming meeting. Of course a flurry of stronger-than-expected economic news in the next few weeks may change the Fed's outlook and cause them to raise rates again.

Intermediate-Term Rates

The chart below illustrates the yield history on the 2-year Treasury Note since the beginning of the year. Given the uncertainty as to the pace of economic growth and inflation, as well as questions as to what actions the Fed may take on interest rates, yields have been in a trading range of approximately 20 basis points for the past month.

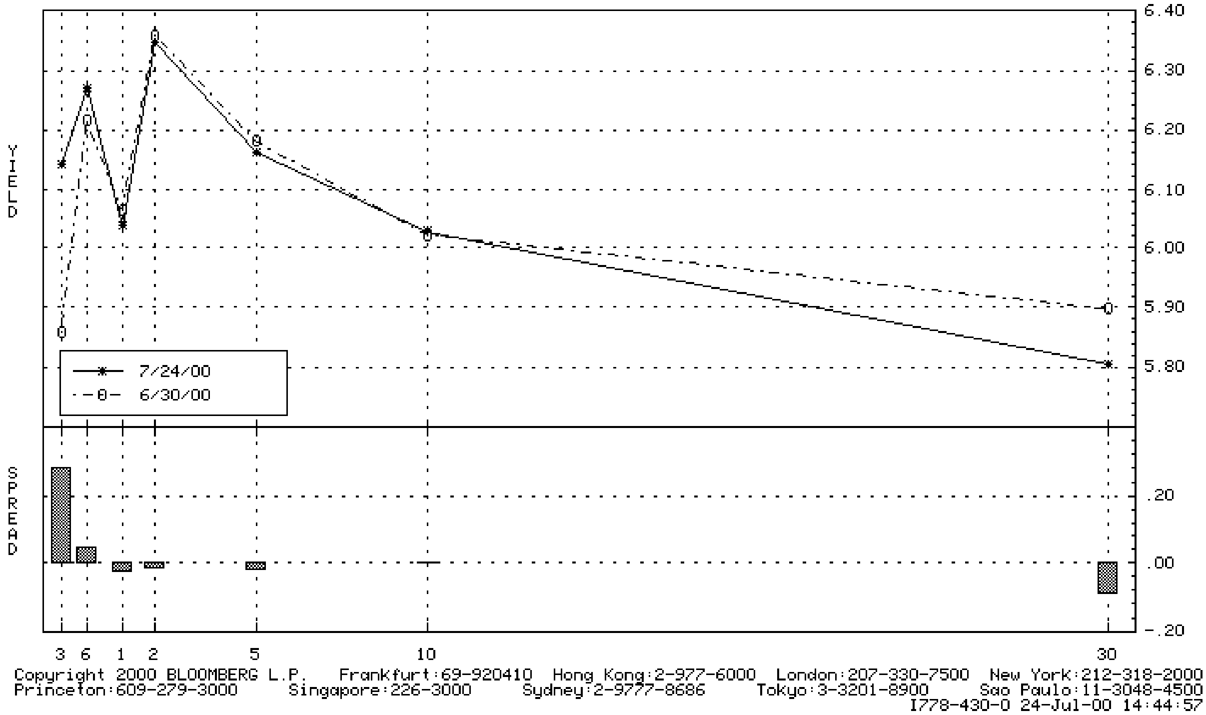
2-Year U.S. Treasury Note Yield
January 3, 2000 – July 17, 2000



Current Yield Curve

The U.S. Treasury yield curve remains inverted out beyond the 2-year maturity range. Rates have decreased modestly since June 30 in maturities out beyond the 5-year mark, as seen in the chart below. The sharp dip in the 1-year area was caused by a short-fall in supply after the Treasury Department decided not to do their monthly auction of 1-year Treasury bills in April and May.

U.S. Treasury Yield Curve
June 30 and July 24



	6/30/00	7/24/00	CHANGE
3 MONTH	5.860	6.140	0.2806
6 MONTH	6.215	6.268	0.0528
1 YEAR	6.062	6.036	-0.0261
2 YEAR	6.358	6.346	-0.0120
5 YEAR	6.179	6.161	-0.0178
10 YEAR	6.023	6.027	0.0047
30 YEAR	5.896	5.807	-0.0890

Sector Distribution

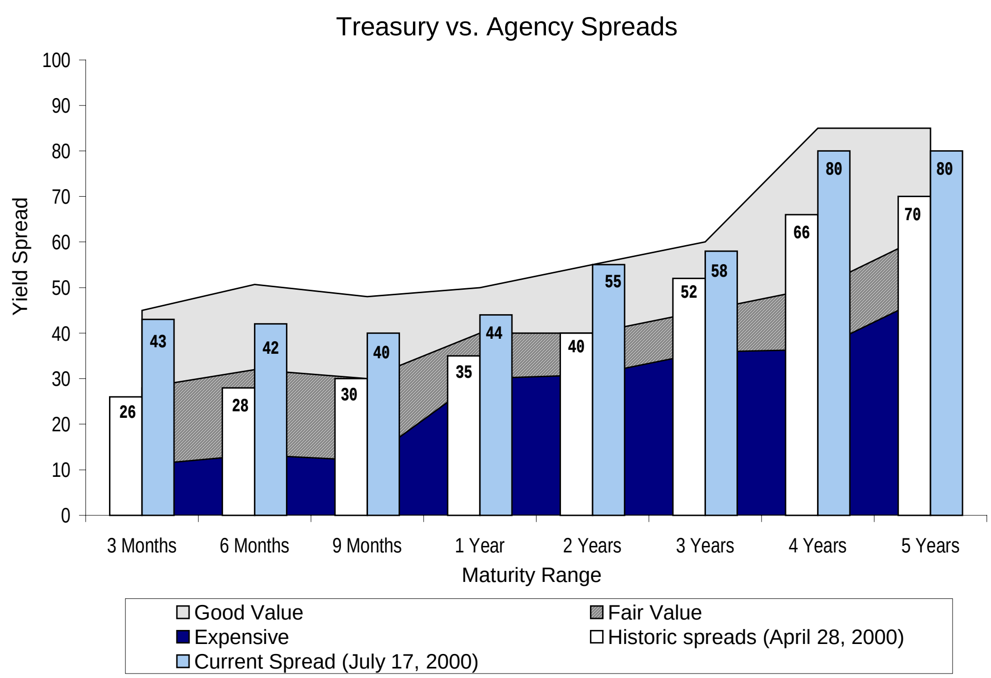
The table below illustrates the change in the portfolio composition from the pervious quarter end to June 30, as well as one year ago. The portfolio remains most heavily weighted in Federal Agency securities, although the overall allocation decreased modestly over the past three months. The County's portfolio increased the overall allocation to commercial paper, which has provided the County with an additional yield pick-up in the short-term area of the market. None of these changes dramatically impacted on the overall sector composition and the portfolio remained well diversified as of June 30, 2000.

Sector Composition Comparison

	6/30/1999	3/31/2000	6/30/2000	Quarter Change
Bankers Acceptances	0.0%	0.0%	0.0%	0.0%
Certificates of Deposit	1.2%	0.0%	2.8%	2.8%
Commercial Paper	10.4%	8.6%	16.6%	8.1%
Federal Agency Discount Notes	2.6%	2.8%	5.0%	2.3%
Federal Agency Notes	60.2%	54.0%	50.5%	(3.6%)
Treasury Securities	9.6%	12.4%	11.3%	(1.1%)
Passbook/Money Market Accts	15.9%	22.2%	13.7%	(8.5%)
Totals	**100%**	**100%**	**100%**	

*Based on par values of securities in pool portfolio.

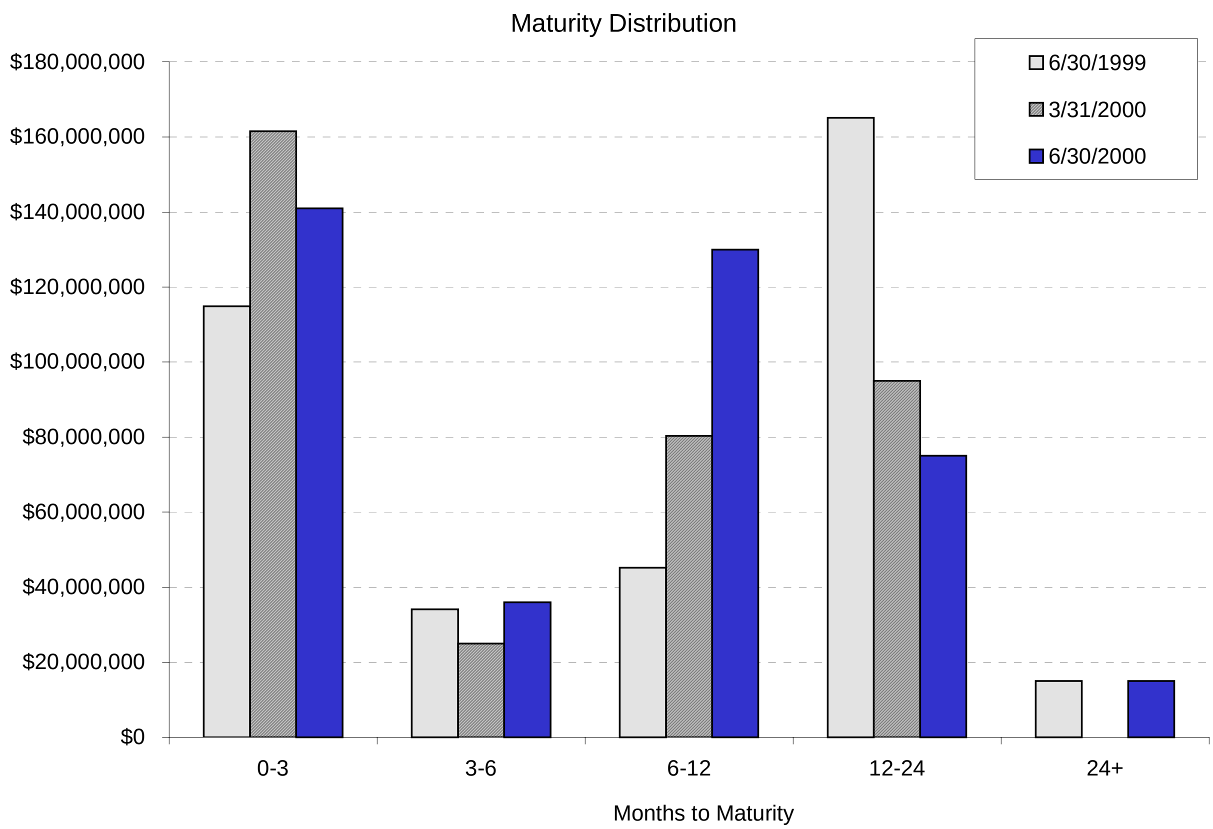
The dramatic widening in spreads between Treasuries and Agencies continued through the second quarter of 2000. Generally, Federal Agency securities represent good value across the curve, as illustrated in the chart below. We would suggest that the County maintains its current sector distribution or possibly increases further its allocation to Agencies up to policy limits, since yield spread remain wide. If yield spreads were to tighten between the two sectors in the future, then we would suggest the County increase the allocation to Treasuries upon maturity of Agency holdings.



Maturity Distribution

The portfolio maturity distribution as of June 30 was largest in the 0-3 month and the 6-12 month maturity ranges, as depicted by the dark bars in the chart below. Overall, the portfolio average maturity increased over the quarter to 8.5 months (257 days) by June 30, 2000 from an average maturity of 6.5 months (197) days as of March 31, 2000.

The chart below illustrates the maturity distribution of the County's portfolio as of the current quarter end of June 30, 2000, the prior quarter end and the distribution a full year ago.

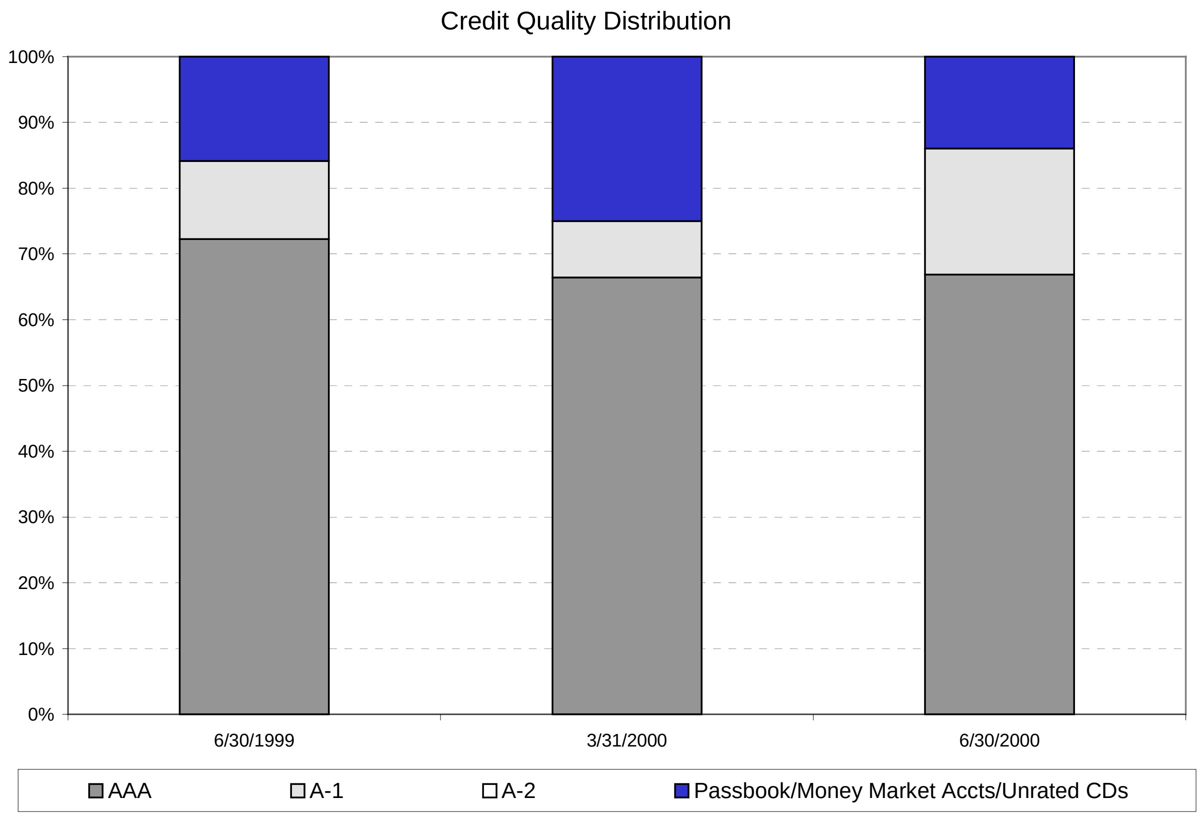


The yield curve remains very steep in the 1-2 year maturity range, with the peak in the curve occurring among 24 month maturities. Therefore, we continue to recommend targeting new investments to the 2-year area. This strategy should allow the County to take advantage of the "roll down the curve effect" as described in the attached copy of "Investment Insights."

Credit Quality

The County's investment strategy maintained the overall high credit quality of the portfolio. As of June 30, 2000, 86% of the portfolio was invested in obligations rated "AAA" or "A-1/P-1," compared to 75% invested in "AAA" and "A-1/P-1" as of March 31.

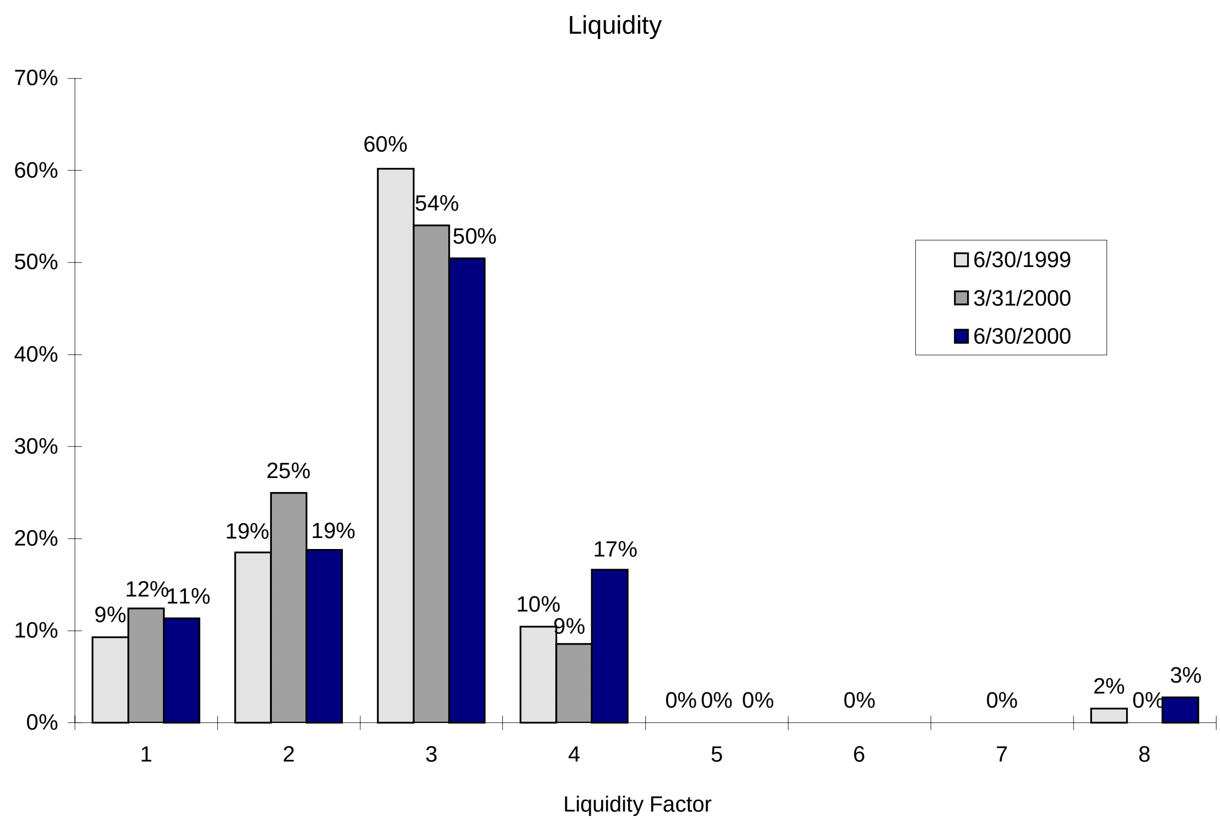
The chart below shows the credit quality distribution of the portfolio as of June 30, 2000, compared to March 31, 2000 and June 30, 1999.



Liquidity

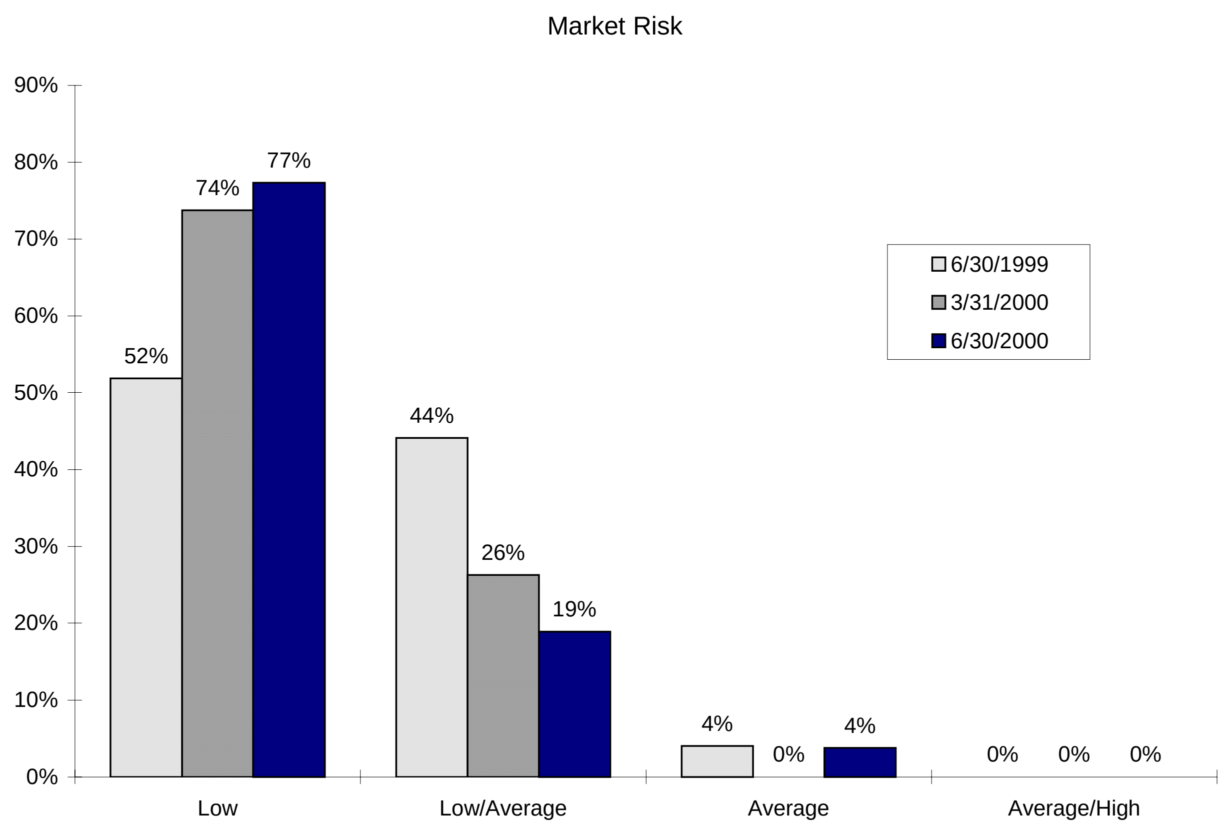
The County's portfolio remains highly liquid. As of June 30, 2000, 97% of the portfolio was invested in obligations rated among one of the four highest liquidity rating categories (1, 2, 3, and 4), with the remaining 3% invested in negotiable certificates of deposit. The average weighted liquidity of the portfolio was 2.89 as of the quarter-end. Overall, the portfolio remains within PFM's recommended liquidity range of 2 to 4.

The chart below shows the liquidity distribution of the portfolio as of June 30, 2000, compared to March 31, 2000 and June 30, 1999. Category 1 represents securities that can be easily sold with little difference between the bid and offer prices, such as U.S. Treasuries. Category 8 represents securities that are generally considered illiquid such as non-negotiable certificates of deposit.



Market Risk

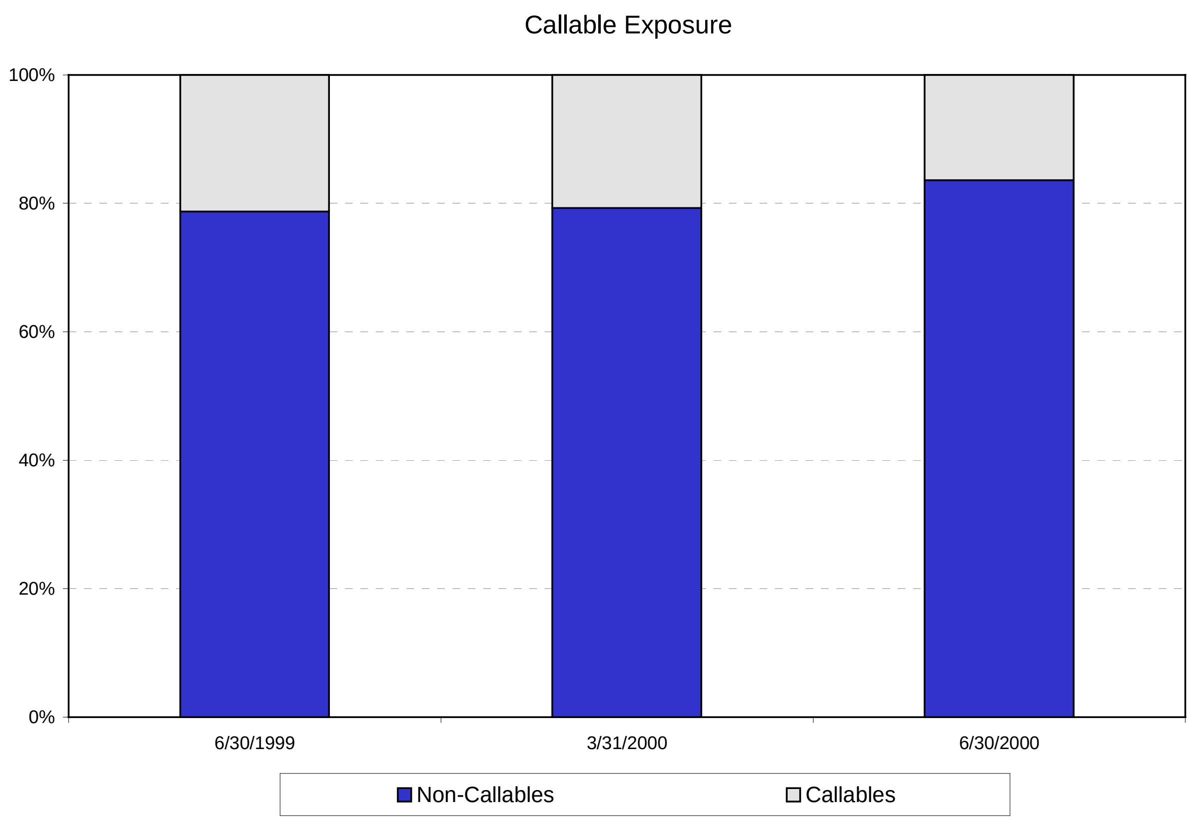
The County's pool portfolio holdings were primarily in securities maturing under 365 days, resulting in 77% of the portfolio classified as having low market risk. All of the securities except $15 million par were invested in securities with maturities under 2 years. Consequently, 96% of the portfolio could be categorized as maintaining low or low/average exposure to market risk, since those obligations matured in less than 2 years. The chart below shows the portfolio's exposure to market risk as of the current quarter end, 3 months ago and one year ago.



Call Exposure

The portfolio's allocation to callable obligations decreased modestly quarter-over-quarter, changing from 21% to 16% by June 30. The pool held $65 million par in callable Federal Agencies as of June 30.

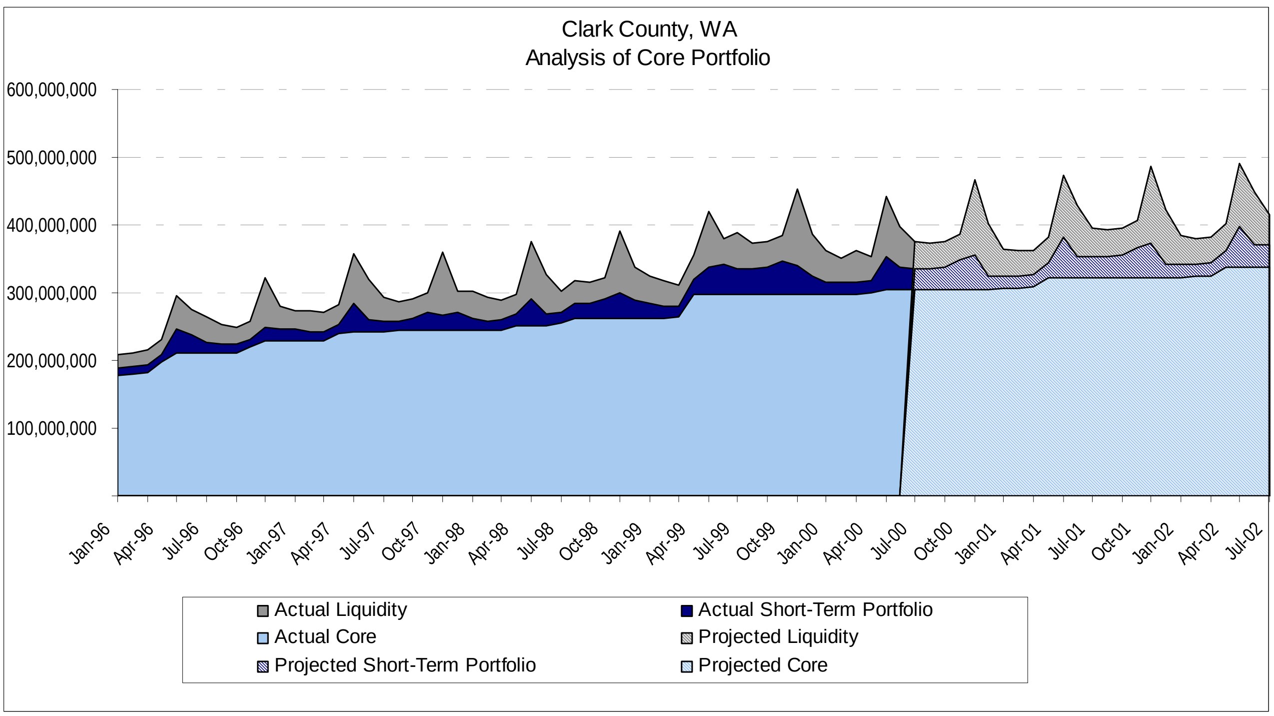
The bar chart below depicts the total portfolio allocation to non-callables (the dark portion of the bars) as a percentage of the entire portfolio par value.



PFM's cash flow model allows us to determine the optimal portfolio mix between short-term liquidity instruments (e.g., the LGIP and money market instruments) and longer-term securities (U.S. Treasury notes and Federal Agency notes). The model also helps to determine how much of the portfolio can be invested in longer-term securities to enhance yield.

We have used the model to analyze the change in the average balance of the Clark County Investment Pool from January 1996 to June 2000. The results are shown in the chart below. The data on the left side represents actual historical data. The data on the right side represents projected balances. Projections are based on historical seasonality[1] and a 5% annual growth rate.

The portfolio is allocated among the following three components: 1) Liquidity – representing funds needed to cover cash needs in the upcoming month. These funds are to be invested in very short-term money market instruments and the State LGIP. 2) Short-term portfolio – this includes funds set aside to provide liquidity for anticipated disbursements in two to six months and an added cushion should liquidity requirements suddenly increase. And 3) Core – this represents the portion of the portfolio that could be invested in longer-term obligations to achieve higher rates of return over the long run.



As reflected by the chart, the County's portfolio balance predictably reaches its peaks in May and November and its low points in March and September. The results of this analysis suggest that the portfolio will remain relatively constant during the third quarter.

[1] A predictable change in the monthly balance from year-to-year due to the timing of cash inflows and outflows.

For the portion of the portfolio that is short, we have included the following table that focuses on the relative value of shorter-term investments between sectors. The table illustrates the current yield spreads and the 6-month average spreads of various short-term securities as compared to U.S. Treasury Bills in the same maturity range. The table also provides an evaluation and current outlook of our portfolio managers on the short-term market. Since the County needs to maintain a high degree of liquidity in its portfolio, this may serve as an additional reference for evaluating trade opportunities in the current market.

REVIEW OF INVESTMENT SECTORS

Sector	Sector Spreads to U.S. Treasuries Bills								Current Evaluation	Recommendation & Outlook for Coming Week
	60-90 days		120-180 days		180-270 days		360-450 days			
	7/24/00	6 mo. Avg.	7/24/00	6 mo. Avg.	7/24/00	6 mo. Avg.	7/24/00	6 mo. Avg.		
US Treasury Bills	5.97		6.16		5.86		6.03			
Agency Discount Notes	0.57 %	0.62%	0.50%	0.50%	0.87%	0.57%	0.81%	0.65%	FAIR - CHEAP/ HOLD or BUY	Agency D/N yields fell & the curve has flattened as fear of future rate hikes ebbs
Non-callable	0.58%	0.65%	0.51%	0.54%	0.88%	0.59%	0.81%	0.66%	FAIR - CHEAP / HOLD or BUY	Some coupon Federal Agency notes offer additional yield to D/N
Callable (1yr/3month)							0.86%	0.72%	FAIR/ HOLD	Callable securities are difficult to find in the 1 year range
Bankers Acceptances	0.64%	0.46%	0.56%	0.43%					FAIR or RICH / HOLD	Somewhat rich versus CP or CDs.
Commercial paper	0.67%	0.74%	0.64%	0.63%	1.00%	0.69%			FAIR - CHEAP/ HOLD or BUY	CP curve has flattened but offers value vs. D/N
Repurchase Agreements (Term)	0.59%		0.51%							Some short-term Repo is cheap versus Agency discos

The next FOMC meeting is scheduled for August 22. Currently there appears to be no clear consensus on whether the Fed will raise short-term rates. Therefore, for the shorter portion of the portfolio, we suggest the County purchase commercial paper and bankers acceptances, up to permitted policy limits, in the 30 day maturity area. Targeting maturities around the upcoming FOMC meeting will allow the County to react quickly to any changes in short-term rates that may occur after the FOMC meeting announcement.

Provided below is a summary of PFM's recommendations.

- **Maintain allocation to Federal Agency obligations.** Yield spreads between U.S. Treasuries and Federal Agencies have widened dramatically across most of the short and intermediate yield curve. For this reason, we recommend that the County maintain a sector allocation target of 50% - 60% to the Federal Agency sector.

- **Consider increasing allocation to commercial paper and bankers acceptances after upcoming Federal Reserve Meeting.** Commercial paper and bankers acceptances continue to represent good relative value among money market investments. It is our recommendation that the County invest its short-term funds in commercial paper and bankers acceptances up to the maximum limit permitted by the County's policy. We would suggest that the County select maturities close to August 22, in order to be able to react quickly to any FOMC decisions on short-term rates.

- **Maintain portfolio average maturity within 9-10 months.** The total portfolio maturity has extended by approximately two months over the quarter. Based on the investment cash flow analysis, as well as considering the current interest rate environment, we suggest that the County maintain the average maturity of the portfolio within the target range of 9-10 months by systematically reinvesting maturities out the yield curve. This strategy will allow the County to benefit from the higher interest rates offered by longer-term obligations and the increase in market value generated by the roll-down-the-curve effect.

- **Take advantage of steepness of the 2-year area of the yield curve.** An analysis of the County's anticipated cash flow requirements suggests that the County will experience a large cash inflow in November and an outflow of funds in December. In addition, a large portion of the pool portfolio will be maturing in the next month. The yield curve continues to peak at the 2-year maturity area, so we would suggest that any funds that the County does not need for liquidity should be invested out in securities maturing in 18 to 24 months.

- **Continue to avoid Japanese bankers' acceptances.** Last week, the Japanese central bank decided to leave interest rates unchanged at 0%, a move many analysts thought was prompted by government pressures rather than sound monetary policy. Consequently, the move was not seen favorably in the foreign exchange markets. The recent bankruptcy of Sogo Ltd., one of the Japan's larger department store operators, also caused worried among investors as to how quickly the Japanese economy was really recovering. We continue to believe it will be some time before credit quality of Japanese financial products will be appropriate for public funds investment.

The sector and maturity composition recommendations below are based on our current market assessment and recommendations, the County's investment objectives and limitations imposed by the County's investment policy.

Investment Sector	Recommended Average Maturity	Current Average Maturity	Recommended % of Portfolio	Current % of Portfolio
U.S. Treasury Obligations	9 months - 1.0 years	0.81 Years	10% - 15%	11%
Federal Agency Notes/Discount Notes	6 month - 2.0 years	1.05 Years	50% - 60%	55%
Commerical Paper, Certificates of Deposit, Domestic Banker's Acceptances, State Pool	10 - 60 days	37 Days	20% - 40%	33%
Aggregate Average Maturity	**9-10 months**	**8.5 Months**		

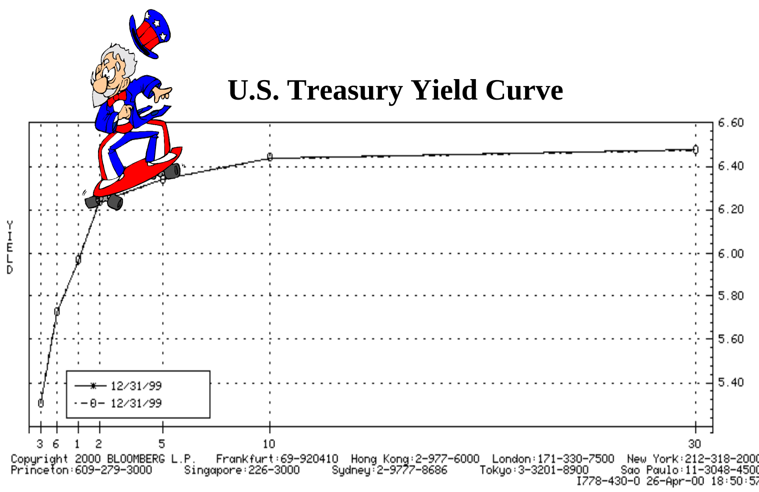
Public Financial Management

Investment Insights

Number 102

Rolling Down the Yield Curve

Active Management Adds Value



Are you still buying securities with staggered maturities and holding them to maturity? While this passive ladder approach may be better than simply keeping the money in a short-term pool, it probably won't generate the highest returns. Active portfolio management, which includes monitoring of the markets and selling securities prior to maturity, can improve returns. "Rolling Down the Yield Curve" is one of the active management techniques that enables PFM to enhance portfolio return and deliver extra value for our clients.

The Theory

To understand the technique, it is necessary to first understand a few things about the yield curve, interest rates and the universe. First, the yield curve is normally upwardly sloped because investors typically demand a higher interest rate on longer-term securities as compensation for higher levels of risk. Second, a fixed-income security will mature at par – regardless of the market value fluctuations that occur prior to maturity. Third, as interest rates go down, the value of a fixed-income investment goes up. And fourth, time never stands still.

Here's how it works. Assume that in the current interest rate environment, three, six and twelve-month U.S. Treasury Bills can be purchased/sold at yields of 5.70%, 5.84% and 6.17%, respectively. (This is approximately where rates were on April 26, 2000.) Let's suspend disbelief for a couple of minutes and assume that interest rates remain at these levels for one year.

Passive Investor A invests a portion of his Rainy Day Fund in a one-year Treasury Bill at 6.17%. One year later, Passive Investor A's Treasury Bill matures at par, and generates a simple interest yield of 6.17% (effective annualized return of 6.25%).

Meanwhile, Active Investor B buys the same one-year Treasury Bill at 6.17%. However, while carefully monitoring her portfolio, Investor B notices an interesting phenomenon. After six months, she no longer owns a **one-year** Treasury Bill. Simply because of the passage of time, she now owns a **six-**

month Treasury Bill. And, six-month Treasury Bills have a yield of 5.84%. Investor B realizes that because the interest rate on her security has gone down, the market value must have gone up. In other words, Investor B's security has an unrealized market value gain. Of course, if she continues to hold the security to maturity, the unrealized gain will gradually disappear so that the Treasury matures at par. So, Investor B sells her six-month Treasury Bill at 5.84% and realizes a handsome capital gain. She then takes the sale proceeds, and purchases a new one-year Treasury Bill at 6.17%. As it is apt to do, history repeats itself and six months later, Investor B once again holds a six-month Treasury Bill. She liquidates this security to realize another capital gain. Because she was able to capitalize on the "roll down the curve" effect, Investor B earned a simple interest yield of 6.41% (effective annualized return of 6.50%).

The Numbers

The math behind the concept of "rolling down the yield curve" is presented in Table 1.

The Real World

OK. The math works, but interest rates don't stay constant over time. What happens if interest rates go up or down during the period? Believe it or not – the technique still works - as long as the shape of the yield curve remains relatively stable and upwardly sloped.

Table 1

Passive Investor A	
Buy 1-year Treasury Bill, Hold to Maturity	
Purchase 1-year Treasury Bill	
Security	Treasury Bill
Coupon	0.00%
Maturity Date	3/1/2001
Settlement Date	3/2/2000
Par	$1,000,000.00
Price	94.1305002
Yield	6.17%
Total Cost	$941,305.00
Maturity	$1,000,000.00
Total Proceeds	$1,000,000.00
Total Proceeds	$1,000,000.00
Total Cost	$941,305.00
Net Earnings	**$58,695.00**
Net Benefit of Roll-Down per $1mm invested	**$2,322.06**

*Hypothetical analysis using 1-year and 6-month T-bill rates as of 4/26/00 and assuming yield curve remains unchanged for the entire 1-year period.

Active Investor B	
Roll Down the Curve	
Purchase 1-year Treasury Bill	
Security	Treasury Bill
Coupon	0.00%
Maturity Date	3/1/2001
Settlement Date	3/2/2000
Par	$1,000,000.00
Price	94.1305002
Yield	6.17%
Total Cost	$941,305.00
Sell in 6 Months, 8/31/00	
Yield on Sale Date	5.84%
Price on Sale Date	97.133500
Sale Proceeds	$971,335.00
Reinvest Proceeds in 1-year Treasury Bill	
Security	Treasury Bill
Coupon	0.00%
Maturity Date	9/1/2001
Settlement Date	8/31/2000
Par	$1,031,000.00
Price	94.1305002
Yield	6.17%
Total Cost	$970,485.46
Extra Cash from Sale Proceeds	$849.54
Sell in 6 Months, 3/1/01	
Yield on Sale Date	5.84%
Price on Sale Date	97.133500
Sale Proceeds	$1,001,446.39
Extra Cash from Sale #1	$849.54
Interest on Extra Cash @6.17%	$26.14
Total Sale Proceeds 3/1/01	$1,002,322.06
Total Proceeds	$1,002,322.06
Total Cost	$941,305.00
Net Earnings	**$61,017.06**